1. A reference generator for providing a reference level, comprising:

a first nonlinear resistive element biased at a constant level to impart first resultant level from said first resistive element;

a first mirror source in communication with the first nonlinear resistive element to receive the first resultant level and provide a first mirrored replication of said first resultant level;

a second nonlinear resistive element biased at the constant level to impart second resultant level from said second resistive element;

a second mirror source in communication with the second nonlinear resistive element to receive the second resultant level and provide a second mirrored replication of said second resultant level; and

a reference level combining circuit connected to receive the first mirrored replication of the first resultant level from the first mirror source and the second mirrored replication of the second resultant level from the second mirror source, from a combination of the first mirrored replication and the second replication creates the reference level.

2. The reference generator of claim 1 wherein the first resistive element has a resistance different from the resistance of the second resistive element.

3. The reference generator of claim 1 wherein the first and second resistive elements are multilevel magnetic tunnel junctions set to differing parallel and anti-parallel magnetic orientations.

4. The reference generator of claim 1 wherein the constant level is a constant voltage and the first and second resultant levels and the first and second mirrored replications are currents.

5. The reference generator of claim 1 wherein the constant level is a constant voltage and the first and second resultant levels and the first and second replications are voltages.

6. The reference generator of claim 4 wherein the reference level combining circuit comprises:

a current summing circuit to additively combine the first and second mirrored replication currents; and

a current scaling circuit to create a scaling of the combined first and second mirrored replication currents to create a reference current.

7. The reference generator of claim 6 wherein the reference level is the reference current.

8. The reference generator of claim 6 further comprising a reference resistor associated with the reference level combining circuit to receive the reference

current wherein the reference level is a voltage developed across the reference resistor with said reference current flowing through the reference resistor.

9. A multi level reference generator for providing a plurality of reference levels, comprising:

a plurality of resistive elements, each resistive element biased at a constant level to impart a resultant level from each resistive element;

a plurality of mirror sources, each mirror source in communication with the one of the plurality of resistive elements such that each mirror source receives the resultant level and provides a mirrored replication of said resultant level; and

a plurality of reference level combining circuits, each reference level combining circuit connected to receive a first mirrored replication of one resultant level from one mirror source and a second mirrored replication of the resultant level from a second mirror source, from a combination of the one mirrored replication from the one mirror source and the second mirrored replication from the second mirror source creates one of the plurality of reference levels.

10. The reference generator of claim 9 wherein each resistive element has a resistance different from the resistance of each of the plurality of restive elements.

11. The reference generator of claim 9 wherein the plurality of resistive elements are multilevel magnetic tunnel junctions set to differing parallel and anti-parallel magnetic orientations.

12. The reference generator of claim 9 wherein the constant level is a constant voltage and the resultant levels of the plurality of resistive elements and the mirrored replications are currents.

13. The reference generator of claim 9 wherein the constant level is a constant voltage and the resultant levels of the plurality of resistive elements and the mirrored replications are voltages.

14. The reference generator of claim 13 wherein each reference level combining circuit comprises:

a current summing circuit to additively combine the first and second mirrored replication currents; and

a current scaling circuit to create a scaling of the combined first and second mirrored replication currents to create a reference current.

15. The reference generator of claim 14 wherein the reference level is the reference current.

16. The reference generator of claim 14 further comprising a plurality of reference resistors, each reference resistor associated with one of the plurality of reference level combining circuits to receive the reference current, wherein the reference

level is a voltage developed across the reference resistor with said reference current flowing through the reference resistor.

17. A method for generating multiple reference levels, comprising the steps of:

providing a plurality of resistive elements

biasing each resistive element at a constant level to impart a resultant level from each resistive element;

replicating the resultant level from each resistive element to provide a mirrored replication of said resultant level from each resistive element; and

repetitively combining two mirrored replications of the resultant levels from two resistive elements to create each of the multiple reference levels.

18. The method of claim 17 wherein each resistive element has a resistance different from the resistance of each of the plurality of restive elements.

19. The method of claim 17 wherein the plurality of resistive elements are multilevel magnetic tunnel junctions set to differing parallel and anti-parallel magnetic orientations.

20. The method of claim 17 wherein the constant level is a constant voltage and the resultant levels of the plurality of resistive elements and the mirrored replications are currents.

21. The method of claim 17 wherein the constant level is a constant voltage and the resultant levels of the plurality of resistive elements and the mirrored replications are voltages.

22. The method of claim 21 wherein repetitively combining two mirrored replications of the resultant levels from two resistive elements comprises the steps of:

summing the two mirrored replication currents; and

creating a scaling of the summed two mirrored replication currents to create a reference current.

23. The method of claim 22 wherein the reference level is the reference current.

24. The method of claim 22 further comprising the steps of:

providing a plurality of reference resistors,

connecting each reference resistor to receive the reference current from each combining of two mirrored replications of the resultant levels, wherein the reference level is a voltage developed across the reference resistor with said reference current flowing through the reference resistor.

25. A multilevel reference generator for providing a plurality of reference voltage levels for a sense amplifier in an array of multilevel magnetic tunneling junctions, comprising:

a plurality of multilevel magnetic tunneling junctions, each multilevel magnetic tunneling junction biased at a constant voltage level to impart a resultant current level from each multilevel magnetic tunneling junction and each multilevel magnetic tunneling junction set to differing parallel and anti-parallel magnetic orientations;

a plurality of current mirror sources, each current mirror source in communication with the one of the plurality of multilevel magnetic tunneling junctions such that each current mirror source receives the resultant current level and provides a mirrored replication of said resultant current level; and

a plurality of reference current level combining circuits, each reference current level combining circuit connected to receive a first mirrored current replication of one resultant current level from one mirror source and a second mirrored current replication of the resultant current level from a second current mirror source, from a combination of the one mirrored current replication from the one current mirror source and the second mirrored current replication from the second current mirror source creates one of the plurality of reference voltage levels.

26. The reference generator of claim 25 wherein each multilevel magnetic tunneling junction has a resistance different from a resistance of each of the plurality of multilevel magnetic tunneling junctions.

27. The reference generator of claim 25 wherein each reference level combining circuit comprises:

a current summing circuit to additively combine the first and second mirrored current replications; and

a current scaling circuit to create a scaling of the combined first and second mirrored current replications to create a reference current.

28. The reference generator of claim 27 further comprising a plurality of reference resistors, each reference resistor is associated with one of the plurality of reference current level combining circuits to receive the reference current, wherein the voltage reference level is a voltage developed across the reference resistor with said reference current flowing through the reference resistor.

29. A multilevel magnetic random access memory comprising:

an array of multilevel magnetic tunneling junctions;

a sense amplifier in communication with the array of multilevel magnetic tunneling junctions to determine a data value stored within a selected cell of said array;

a multilevel reference generator for providing a plurality of reference voltage levels for the sense amplifier, comprising:

a plurality of multilevel magnetic tunneling junctions, each multilevel magnetic tunneling junction biased at a constant voltage level to impart a resultant current level from each multilevel magnetic tunneling junction and each multilevel magnetic tunneling junction set to differing parallel and anti-parallel magnetic orientations;

a plurality of current mirror sources, each current mirror source in communication with the one of the plurality of multilevel magnetic tunneling junctions such that each current mirror source receives the resultant current level and provides a mirrored replication of said resultant current level; and

a plurality of reference current level combining circuits, each reference current level combining circuit connected to receive a first mirrored current replication of one resultant current level from one mirror source and a second mirrored current replication of the resultant current level from a second current mirror source, from a combination of the one mirrored current replication from the one current mirror source and the second mirrored current replication from the second current mirror source creates one of the plurality of reference voltage levels.

30. The multilevel magnetic random access memory of claim 29 wherein each multilevel magnetic tunneling junction within said array has a resistance different

from a resistance of each of the plurality of multilevel magnetic tunneling junctions.

31. The multilevel magnetic random access memory of claim 29 wherein each reference level combining circuit comprises:

a current summing circuit to additively combine the first and second mirrored current replications; and

a current scaling circuit to create a scaling of the combined first and second mirrored current replications to create a reference current.

32. The multilevel magnetic random access memory of claim 31 wherein the multilevel reference generator further comprises a plurality of reference resistors, each reference resistor associated with one of the plurality of reference current level combining circuits to receive the reference current, wherein the voltage reference level is a voltage developed across the reference resistor with said reference current flowing through the reference resistor.